

Application No. 09/558,266

described in copending and commonly assigned U.S. Patent Application Serial Number 09/311,506, now U.S. Patent 6,394,494 to Reitz et al., entitled "Metal Vanadium Oxide Particles," incorporated herein by reference. Nanoscale carbon particles produced by laser pyrolysis are described in a reference by Bi et al., entitled "Nanoscale carbon blacks produced by CO₂ laser pyrolysis," J. Mater. Res. Vol. 10, No. 11, 2875-2884 (Nov. 1995), incorporated herein by reference.

At page 33, lines 10-27, the paragraph has been amended as follows:

The production of ternary nanoparticles of aluminum silicate and aluminum titanate can be performed by laser pyrolysis following procedures similar to the production of silver vanadium oxide nanoparticles described in copending and commonly assigned U.S. Patent Application Serial Number 09/311,506, now U.S. Patent 6,394,494 to Reitz et al., entitled "Metal Vanadium Oxide Particles," incorporated herein by reference. Suitable precursors for the production of aluminum silicate include, for vapor delivery, a mixture of aluminum chloride (AlCl₃) and silicon tetrachloride (SiCl₄) and, for aerosol delivery, a mixture of tetra(N-butoxy) silane and aluminum isopropoxide (Al(OCH(CH₃)₂)₃). Similarly, suitable precursors for the production of aluminum titanate include, for aerosol delivery, a mixture of aluminum nitrate (Al(NO₃)₃) and titanium dioxide (TiO₂) powder dissolved in sulfuric acid or a mixture of aluminum isopropoxide and titanium isopropoxide (Ti(OCH(CH₃)₂)₄).

Claims As Amended

Please cancel claims 2, 3, 30-40 without prejudice or disclaimer.

Please substitute the following amended claims for those currently pending:

1. (Amended) A material having a layer, the layer comprising a plurality of self-assembled structures comprising compositions, wherein the structures are localized in separate,

Application No. 09/558,266

selected islands covering a portion of the layer in an integrated assembly and wherein the compositions comprise inorganic particles.

4. (Amended) The material of claim 1 [3] wherein the inorganic particles have an average secondary particle diameter from about 2 nm to about 200 nm.

5. (Amended) The material of claim 1 [3] wherein the inorganic particles have an average secondary particle diameter less than about 100 nm and the primary particles having a distribution in sizes such that at least about 95 percent, of the primary particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.

6. (Amended) The material of claim 1 [3] wherein the particles include effectively no primary particles with a diameter greater than about a factor of four times the average particle size.

7. (Amended) The material of claim 1 [3] wherein the particles have an average secondary particle diameter less than about 100 nm, the particles being located within pores of a material in the layer.

8. (Amended) The material of claim 1 [3] wherein the particles comprise a metal oxide.

41. (Amended) The material of claim 1 [3] wherein the inorganic particles have an average primary particle diameter from about 2 nm to about 100 nm.

42. (Amended) The material of claim 1 [3] wherein the inorganic particles have an average primary particle diameter from about 12 nm to about 50 nm.

43. (Amended) The material of claim 1 [3] wherein the particles are in an ordered array within at least one of the self-assembled islands.

Application No. 09/558,266

44. (Amended) The material of claim 1 wherein the plurality of islands are located along different layers [levels relative to a plane] within the material.